July 6 - July 12, 2001

The Terra spacecraft is operating in nominal mode. All instruments are in nominal science mode.

The MODIS instrument continues to operate in normal science mode on Side A (Command processor A, Power Supply 1). There have been no Data Formatter resets since July 3, 2001. Direct Broadcast data from various sites has been analyzed. The MODIS Characterization Support Team has evaluated the thermal emissive band data, which appears largely as expected for Side A. The anomaly team is continuing to work on determining the cause of the B Power Supply anomaly and the B-side processor start up problems.

MODIS Direct Broadcast data is currently not available at GSFC because of an inoperative server in Building 28. This is a consequence of a lightning strike to Building 28. The server is expected to be restored by Friday July 13, enabling MODIS Direct Broadcast data to be utilized again at GSFC.

MOPITT continues to operate with one cooler, allowing useful data to be collected from detectors 5-8. Science data are being analyzed to determine the effects of operating in this mode. Loss in vertical resolution of some chemical species is expected. MISR and ASTER data are being examined to determine if any jitter can be observed in their images as a result of the MOPITT coolers being run slightly out of balance. No significant jitter or other issues are expected.

MISR, MODIS and CERES all participated in the successful CLAMS field campaign over the Chesapeake Bay on Tuesday July 10, 2001. A planned lunar calibration roll maneuver for MODIS was re-scheduled to be executed after the completion of the noon local time Terra pass over the Chesapeake, in order to avoid conflict with data acquisition as part of CLAMS.

The roll maneuver was executed two orbits later than originally requested. Because of this, the phase angle of the lunar view was less useful for long term radiometric stability monitoring. However, the data are still useful for the degradation discontinuity check (important for calibration) and for A-side crosstalk assessment. This will be important in the ultimate decision as to whether or not to transition MODIS back to the B side. The next MODIS lunar calibration roll maneuver is planned for August 2001.

Corrupted Flight Dynamics products generated on June 26 resulted in system errors, causing instrument activities to be deleted from the mission timeline used to support daily command load generation. This was discovered early enough to allow regeneration of load inputs for all

instruments except ASTER. ASTER experienced the most difficulty because of the fact that the instrument relies heavily on Flight Dynamics products for node crossing and other orbital event times. ASTER was unable to provide command load inputs to continue observations, and thus did not collect science data on July 7 and 8.

The problem has been diagnosed and steps are being taken to ensure this does not happen in the future. The chain of events resulting in the generation of the corrupted products started with a lightning-induced power outage on June 25. The problem was exacerbated through operator error in the recovery and regeneration of Flight Dynamics products that were corrupted. New Standard Operating Procedures (SOP) are being written to ensure that the correct steps are taken when operator intervention in autonomous product generation is required.

The ASTER Shortwave Infrared (SWIR) Temperature analysis and adjustment effort is ongoing. SWIR heaters 3 & 4 were turned off on June 20 and the SWIR Capillary Pumped Heat Transport System set point will be incrementally lowered by 4.5 degrees starting on or about July 24.